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08/098,896 07/29/93 SATO

K SON417

EXAMINER

SARRAS, S

26M2/0210

ART UNIT

PAPER NUMBER

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2609

DATE MAILED: 02/10/95

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

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This application has been examined Responsive to communication filed on 11-28-94 This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892.
2. Notice of Draftsman's Patent Drawing Review, PTO-948.
3. Notice of Art Cited by Applicant, PTO-1449.
4. Notice of Informal Patent Application, PTO-152.
5. Information on How to Effect Drawing Changes, PTO-1474..
6.

Part II SUMMARY OF ACTION

1. Claims 1-10 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. Claims 1, 2, 3 have been cancelled.

3. Claims 4/7, 5/7, 4/8/7, 5/8/3, 7, 8 and 9/7 are allowed.

4. Claims 4/6, 5/6, 6, 9/6, and 10 are rejected.

5. Claims _____ are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. Formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable; not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner; disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed _____, has been approved; disapproved (see explanation).

12. Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has been received not been received been filed in parent application, serial no. _____; filed on _____.

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

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Part III DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 4/6, 5/6, 6, 9/6 and 10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amendment to claim 6, filed 11/28/94, claims "transmitting means for transmitting information corresponding to a predetermined range of voltage values..." and "said predetermined range defining a dead zone of values wherein no voltage value is outputted". However, if information which is transmitted corresponds to the predetermined range and the predetermined range outputs a dead zone with no voltage values, it appears that no information will be transmitted. In other words, claim 6 as now claimed, only transmits data in the predetermined dead zone, but the dead zone has no values. Further, "a predetermined range of voltage values", in line 11, lacks antecedent basis. Claim 10 is confusing because it claims a dead zone in which no voltage is output when the operator touches the detecting means. It would seem the user must always touch the device to operate it? Claims 4/6, 5/6 and 9/6 are rejected as being dependent on a rejected base claim.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

3. Claims 4/6, 5/6, 6, 9/6 and 10 are rejected under 35 U.S.C. § 103 as being unpatentable over LaBiche et al and Felsenstein.

LaBiche discloses an input apparatus H with detecting means A, B, C, A', B', C' (i.e. six accelerometers shown in fig. 2) which detect the physical displacement of a given movement in space. Information generating means for generating position specifying information based on the detection results is disclosed by Signal PreProcessor Computer 40 in fig. 4. Transmitting means for transmitting the position specifying information generated by said information generating means is disclosed by block 113 in the flow diagram of fig. 7.

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LaBiche does not disclose the resting state detecting means or a predetermined range of voltage values defining a dead zone.

Felsenstein discloses an input device (joystick) and control means for controlling a cursor on a display. The control means includes circuitry to detect the motion of the input device and transmit the data to circuitry for controlling the cursor. Included is a dead band amplifier which elements spurious responses and outputs a zone of values with no voltage output. "The output of the joystick (10) is processed by an amplifier (14) having a "dead zone" centered about the zero-input response of the joystick (10). This dead zone is useful to eliminate spurious system response due to noise or incremental offset of the joystick (10).", col. 4, lines 3-7.

It would have been obvious for one skilled in the art to alter LaBiche so he can detect a resting state. This is suggested by Felsenstein who provides a dead band near the center response of a joystick. The center response of the joystick is a resting state of the input device. It would have been obvious to include a resting state detection as motivated by Felsenstein who tries to eliminate incremental offset. That is, the reference value will not be changed in the resting state. Further, the dead zone can be used to filter out spurious noise as suggested by Felsenstein. This would also apply to any input device including the device of LaBiche. For example spurious noise such as

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improper movements can be eliminated or filter out by setting them in a dead zone in which no voltage value is output. Further, since LaBiche is directed to a hand held input device, it would have been obvious to include a resting state detection method so the system could power down automatically so power or energy can be saved. By providing a second detector with a reference voltage the resting state could be detected when the remainder of the circuit or computer is in a wait or power saving mode.

Claim 6 is taught by the above combination, see previous discussion. Claim 4 is taught by LaBiche with plural detecting devices A, B, C, A', B' and C', shown in fig. 2. Each detecting means specifying position information at multidimensional coordinates in space. As to claim 5, since the detectors of LaBiche are accelerometers the device will be in a floating state with no motion. Further, gravity forms a constant direction for any hand-held device, i.e. down is a constant direction for a user since this seems natural to a user. There for, given a hand-held input device the device is always held in relation to gravity. As to claim 9 this is taught by LaBiche wherein various buttons or actuators can be placed on the device H. As to claim 10, this is suggested by Felsenstein wherein the spurious noise can be caused by unintended movement. As modified, the dead zone would filter unintended movement of the input device of LaBiche which would include motion when the

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device is not in use such as when the user simply carries the device.

Allowable Subject Matter

4. Claims 4/7, 5/7, 4/8/7, 5/8/7, 7, 8 and 9/7 are allowable over the prior art of record.

Response to Amendment

5. Applicant's arguments with respect to claims 4-6 and 8-10 have been considered but are deemed to be moot in view of the new grounds of rejection.

Conclusion

6. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION

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IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Saras whose telephone number is (703) 305-4718.

MM
Steven J. Saras
February 3, 1995



RICHARD D. OJEA
PRIMARY ART EXAMINER
CET